

What is claimed is:

1. An absorbable, conformable composite preform for use in making a solid bone filler comprising an absorbable mixture of oppositely charged, solid microparticulate polyelectrolytes encased in a sealed, flexible, absorbable copolyester fabric construct and capable of undergoing solidification to a solid, integral mass having a modulus of more than about 0.5 GPa upon contact with an aqueous medium.
2. An absorbable, conformable composite preform as set forth in claim 1 wherein one of the microparticulate polyelectrolytes comprises a positively charged chitosan.
3. An absorbable, conformable composite preform as set forth in claim 1 wherein one of the polyelectrolytes comprises a negatively charged polymeric phosphate glass or ceramic.
4. An absorbable, conformable composite preform as set forth in claim 1 wherein the oppositely charged polyelectrolytes comprise an ionic conjugate of a polymeric phosphate glass or ceramic and a chitosan.
5. An absorbable, conformable composite preform as set forth in claim 1 wherein at least one of the polyelectrolytes comprises a polypeptide having side groups selected from amino side groups and carboxylic side groups.
6. An absorbable, conformable composite preform as set forth in claim 5 wherein the polypeptide comprises polylysine.
7. An absorbable, conformable composite preform as set forth in claim 5 wherein the polypeptide is selected from polyaspartic acid and polyglutamic acid.
8. An absorbable, conformable composite preform as set forth in claim 1 wherein the flexible copolyester fabric construct comprises a high lactide segmented copolymer.

9. An absorbable, conformable composite preform as set forth in claim 1 wherein the surface of the flexible fabric construct comprises carboxylic groups and wherein at least one growth factor is ionically immobilized on the carboxylic groups.
10. An absorbable, conformable composite preform as set forth in claim 9 wherein the at least one growth factor comprises a basic fibroblast-derived growth factor (FGF-2).
11. An absorbable, conformable composite preform as set forth in claim 1 as a replacement for a lost part of a craniomaxillofacial bone.
12. An absorbable, conformable composite preform for use in making a solid bone filler comprising a mixture of a microparticulate zincophosphate glass or glass-ceramic and at least one material carrying both acidic and basic groups on the same molecule, wherein the mixture is encased in a sealed flexible, absorbable copolyester fabric construct, and wherein the preform is capable of undergoing solidification to a solid, integral mass having a modulus of more than about 0.5 GPa upon contact with an aqueous medium.
13. An absorbable, conformable composite preform as set forth in claim 12 wherein the at least one material carrying both acidic and basic groups comprises an amino acid selected from the group consisting of glycine, lysine, glutamic acid, and aspartic acid.
14. An absorbable, conformable composite preform as set forth in claim 13 further comprising calcium sulfate microparticulates.
15. An absorbable, conformable composite preform as set forth in claim 13 further comprising calcium phosphate microparticulates.
16. An absorbable, conformable composite preform as set forth in claim 12 wherein the flexible copolyester fabric construct comprises a high lactide segmented copolymer.

17. An absorbable, conformable composite preform as set forth in claim 12 wherein the surface of the flexible fabric construct comprises carboxylic groups and wherein at least one growth factor is ionically immobilized on the carboxylic groups.
18. An absorbable, conformable composite preform as set forth in claim 17 wherein the at least one growth factor comprises a basic fibroblast-derived growth factor (FGF-2).
19. An absorbable, conformable composite preform as set forth in claim 12 as a replacement for a lost part of a craniomaxillofacial bone.